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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,174	12/08/2006	Raymond Zagranski	61459-2(49366)	1183
21874 7590 12/17/2010 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205				
EXAMINER				
NGUYEN, ANDREW H				
ART UNIT		PAPER NUMBER		
3741				
MAIL DATE		DELIVERY MODE		
12/17/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/567,174

**Applicant(s)**

ZAGRANSKI ET AL.

**Examiner**

ANDREW NGUYEN

**Art Unit**

3741

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-10, 12-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10, 13, 14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Misc. Communication

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10567174	12/8/2006	ZAGRANSKI ET AL.	61459-2(49366)

EDWARDS ANGELL PALMER & DODGE LLP  
P.O. BOX 55874  
BOSTON, MA 02205

**EXAMINER**

ANDREW NGUYEN

ART UNIT	PAPER
3741	20101209

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner for Patents**

The notice of abandonment mailed on 9/13/10 is withdrawn because Applicant's reply to the non-final rejection was timely mailed.

### **FINAL REJECTION**

This is a final office action in response to Applicant's amendment filed 9/7/10.

#### **Abandonment**

1. The notice of abandonment mailed 9/13/10 is withdrawn because Applicant's response (mailed 9/2/10) was timely.

#### **Response to Arguments**

2. Applicant's arguments with respect to claims 1, 3-10, 13-14, and 16-23 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment.

Regarding the 112 rejections for the "means for" statements, Applicant asserts that "the specification illustrates that a minimum flow overspeed solenoid valve 28 is used in conjunction with other structures for providing a desired minimum fuel flow ...". Examiner asserts that this is an unclear limitation. Patent protection cannot be obtained for "other structures" because it does not provide a clear and distinct limitation. It is unclear what structures Applicant is claiming in the "means for".

Applicant asserts that Dalton does not teach an altitude sensor and based on input from the altitude sensor, either shuts off fuel flow or reduces the fuel flow to a minimum. Examiner asserts that Dalton teaches the main concept of Applicant's invention, that is, providing minimum fuel flow to prevent overspeed at a certain altitude, and then at another altitude, shutting off the fuel flow. The only items missing in Dalton are an altitude sensor and speed sensor. However, these two items are obvious and common in the art. Examiner draws Applicant's attention to Dalton's statement, "It is envisioned that at altitude, the minimum flow mode may not result in containment of the emergency and total shutdown may be necessary".

One of ordinary skill in the art would recognize that a measurement of altitude would allow a determination of when shutdown should be necessary.

### **Claim Objections**

3. Claim 14 is objected to because the recitation “proving” is presumed to be “providing” for proper clarity. Appropriate correction is required.

### **Claim Rejections - 35 USC § 112**

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3-10 and 13, 14, and 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claims 1 and 14 recite a “means for providing a desired minimum fuel flow ...” and a “means for shutting off fuel flow”. Accordingly, 112 sixth paragraph appears to be invoked. However, the specification does not clearly state the structure by which either of the “means for” are accomplished. It is unclear what structure is required. Applicant discloses solenoids as being part of the structure. However, it is unclear what structure is required in addition to the solenoids (or if it is only the solenoids). The specification must clearly and distinctly define the structure encompassed by the “means for”. If Applicant does not wish to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that it will clearly not be a means plus function limitation (e.g., deleting the phrase “means for”).

7. Claim 13's "the second operating range" lacks antecedent basis. Correction is required.
8. Claim 16 is dependent upon a cancelled claim. Correction is required.

### **Claim Rejections - 35 USC § 103**

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 4, 8-10, 13, 14, and 20-23 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,996,969 (Dalton) in view of US 6,612,166 (Golly) and US 4,045,955 (Brannstrom).

The applied reference (Dalton) has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome

by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claims 1, 4, 8-10, 13-14, 20-23:

Dalton teaches a fuel control system that controls fuel flow to the engine during an overspeed condition. Dalton doesn't specifically discuss detecting overspeed, but detection of overspeed is performed in order for Dalton's device to function - taking action during overspeed must be preceded by a recognition that overspeed is occurring (i.e. detection). Dalton teaches two operating altitude ranges. During one range, a minimum fuel flow is provided to the engine (see col 4 lines 39-56). During a second range, when the engine is "at altitude", the fuel flow may be shut down entirely (col 5 lines 3-8; "at altitude" considered a "relatively high altitude"; fuel shutdown means is not activated until this condition is met – it is considered disabled). Dalton's means for providing minimum fuel flow and fuel shutdown are solenoids 120 and 100, respectively. Dalton also teaches a dual channel system having interchannel communication (1<sup>st</sup> channel 13, second channel including 15 and 17; communicate at 14).

Dalton is silent as to how overspeed is detected. However, Brannstrom teaches that speed sensors were well known in the art for detecting overspeed (sensor 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add a first sensor to Dalton in order to measure turbine speed, as taught by Brannstrom. Brannstrom further teaches that detecting overspeed along two different control paths was well known in the art (see the Figure; first path includes non-derivative logic 15 and derivative logic 17; second path includes non-derivative logic 13). Brannstrom also teaches the overspeed detection based on the power turbine speed signal (see the Figure; power turbine 4). It

would have been obvious to one of ordinary skill in the art at the time of the invention to detect overspeed along two different signal paths, a derivative and a non-derivative, and based on the power turbine speed signal, as taught by Brannstrom.

Dalton is also silent as to using a second sensor for detecting altitude. However, Golly teaches that using altimeters to measure altitude in aircraft was well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add an altimeter to Dalton in order to measure altitude, as taught by Golly.

11. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,996,969 (Dalton) in view of US 6,612,166 (Golly) and US 4,045,955 (Brannstrom) as applied to claim 1 above, and further in view of US 2002/0012071 (Sun).

Regarding claims 3 and 16:

Dalton fails to teach that above an altitude above 10,000 feet, the fuel is shut down. Dalton does, however, teach that "at altitude", the fuel is shut down. Sun teaches that in the aircraft industry, aircraft are commonly flown above 10,000 feet and that it is a "mid-altitude". Thus, Dalton's recitation of an aircraft flying "at altitude" could be obviously considered above 10,000 feet, since aircraft are so commonly flown above this limit, as taught by Sun.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the second operating range above 10,000 feet, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. In this case, Dalton defines the second operating range as "at altitude" without specifically

defining the range. Finding the appropriate range is considered within the level of ordinary skill in the art.

12. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,996,969 (Dalton) in view of US 6,612,166 (Golly) and US 4,045,955 (Brannstrom) as applied to claim 1 above, and further in view of US 2003/0107341 (Morris).

Regarding claims 5 and 17:

Dalton/Brannstrom fails to teach the non-derivative logic including proportional logic and the derivative path including proportional logic. However, shaft speed control systems were well known in the art to comprise proportional logic with both derivative and non-derivative logic, as taught by Morris (paragraph 2; "Known feedback control schemes include proportional, integral, and/or derivative control schemes"). It would have been obvious to one of ordinary skill in the art at the time of the invention to use proportional logic with the derivative and non-derivative path of Dalton/Brannstrom as a matter of obvious design choice, as taught by Morris.

13. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,996,969 (Dalton) in view of US 6,612,166 (Golly) and US 4,045,955 (Brannstrom) as applied to claim 1 above, and further in view of US 5,301,499 (Kure-Jensen)

Regarding claims 6 and 18:

Dalton fails to teach reset logic for controlling a latch. However, control systems were well known in the art to use "reset logic" in order reset the system for startup, as taught by Kure-Jensen (col 11 lines 37-56; during a certain condition, "reset" is initiated through latch 162).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add reset logic with a latch to Dalton in order to reset the system for startup.

14. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,996,969 (Dalton) in view of US 6,612,166 (Golly) and US 4,045,955 (Brannstrom) as applied to claim 1 above, and further in view of US 6,625,504 (Landreth).

Regarding claims 7 and 19:

Dalton fails to teach a software interface for testing performance. However, turbines were well known in the art to have software interfaces in order to monitor testing, as taught by Landreth (col 3 lines 12-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add a software interface in Dalton for testing purposes, as taught by Landreth.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Contact information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW NGUYEN whose telephone number is (571)270-5063. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cuff can be reached on (571)-272-6778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Rodríguez/  
Primary Examiner, Art Unit 3741

/AN/